PAT-NO: JP410060608A

DOCUMENT-IDENTIFIER: JP 10060608 A

TITLE: FERROUS SOFT MAGNETIC ALLOY WITH HIGH SATURATION
MAGNETIC FLUX DENSITY

PUBN-DATE: March 3, 1998

INVENTOR-INFORMATION:
NAME
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ASSIGNEE-INFORMATION:

NAME	COUNTRY
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APPL-NO: JP09124804

APPL-DATE: April 28, 1997

INT-CL (IPC): C22C038/00, G11B005/127 , H01F001/14

ABSTRACT:

CHG DATE=19990617 STATUS=O> In ISDN, the new digital communication system,
transmission takes place between the network termination (2) and the terminals
(3) via the so-called So interface by means of interface transformers (6, 11).
Since some power is also supplied to the terminals via these transformers,
current unbalance in the lines (7, 8) or (9, 10) results in bias magnetisation
of the transformers. The ISDN requirements on the transformers must therefore
also be met in the presence of DC current bias magnetisation. Compact
transformers with a simple winding structure which meet ISDN requirements have,
according to the invention, as their magnet core material an amorphous Co-based
alloy with a permeability of more than 25 000 and less than 95 000. As well as
Co, the magnet cores preferably contain essentially Fe and Mn with a total
content of 3 to 8 atomic per cent and metalloids in a proportion of 24 to 29
atomic per cent and optionally up to 15 atomic per cent Ni and up to 1 atomic
per cent Mo, Cr and/or Ni. <IMAGE>

PAT-NO: JP404120255A

DOCUMENT-IDENTIFIER: JP 04120255 A

TITLE: ALLOY NET FOR ELECTROMAGNETIC SHIELDING

PUBN-DATE: April 21, 1992

INVENTOR-INFORMATION:
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ASSIGNEE-INFORMATION:

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APPL-NO: JP02237756

APPL-DATE: September 7, 1990

INT-CL (IPC): C22C038/00, H05K009/00

ABSTRACT:

PURPOSE: To produce an alloy net for electromagnetic shielding having high

saturation magnetic flux density and high magnetic permeability by preparing a
net of an alloy having a composition consisting of specific percentages of Fe,
Co, B, Zr, Cu, etc.

CONSTITUTION: A net of an alloy having a composition represented by a
formula (Fe<SB>1-a</SB>Co<SB>a</SB>)<SB>b</SB>BxTyT'z is prepared. In the
formula, T means one or ≥2 elements selected from the group consisting of
Ti, Zr, Hb, V, Nb, Ta, Mo, and W and includes Zr and/or Hb and T' means one or
≥2 elements selected from the group consisting of Cu, Ag, Au, Ni, Pd, and
Pt, and further, ≤0.05 and the symbols (b), (x), (y), and (z) stand for, by
atomic % ≤92%, 0.5 to 16%, 4 to 10%, and 0.2 to 4.5%, respectively. By this
method, the alloy net for electromagnetic shielding having high saturation
magnetic flux density as well as magnetic permeability as high as ≥about
10000 can be obtained.

PAT-NO: JP410060607A

DOCUMENT-IDENTIFIER: JP 10060607 A

TITLE: HIGH HARDNESS FERROUS SOFT MAGNETIC ALLOY

PUBN-DATE: March 3, 1998

INVENTOR-INFORMATION:
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SUZUKI, SEISAKU
MAKINO, TERUHIRO
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INOUE, AKIHISA
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ASSIGNEE-INFORMATION:

NAME	COUNTRY
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MASUMOTO TAKESHI	N/A
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APPL-NO: JP09124803

APPL-DATE: April 28, 1997

INT-CL (IPC): C22C038/00, G11B005/127 , H01F001/14

ABSTRACT:

PROBLEM TO BE SOLVED: To obtain a high hardness ferrous soft magnetic alloy
by preparing a ferrous soft magnetic alloy which has a composition represented
by specific formula and containing Fe, Co, B, Zr, Cu, etc., and is which the
angle of diffraction in the X-ray diffraction pattern is specified.

SOLUTION: An amorphous alloy, having a composition represented by formula
(Fe<SB>1-a</SB>Co<SB>a</SB>)<SB>b</SB>B<SB>x</SB>T<SB [where
T' means one or more elements among Ti, Zr, Hf, V, Nb, Ta, Mo, and W and
occludes either or both of Zr and Hf, T' means one or more elements among Cu,
Ag, Au, Ni, Pd, and Pt, and the symbols (a), (b), (x), (y), and (z) stand for
≤0.05, 75-92 atomic %, 0.5-16 atomic %, 4-10 atomic %, and 0.2-4.5 atomic %,
respectively], is cooled rapidly from molten metal state. Subsequently, heat
treatment is carried out at 500-700°C to precipitate fine crystalline
grains, by which a ferrous soft magnetic alloy, in which the diffraction peal
of body-centered cubic crystal Fe exists on the range of 40-50° diffraction
angle 3θ in the X-ray diffraction pattern using CuKα ray, is
prepared. By this method, the high hardness ferrous soft magnetic alloy,
combining high saturation magnetic flux density with high magnetic permeability
and having high thermal; stability, can be obtained.

PUB-NO: EP000378823A2

DOCUMENT-IDENTIFIER: EP 378823 A2

TITLE: Magnet core for an interface transformer.

PUBN-DATE: July 25, 1990

INVENTOR-INFORMATION:

NAME	COUNTRY
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HILZINGER, HANS-REINER DR	N/A
PETZOLD, JORG DR	N/A

ASSIGNEE-INFORMATION:

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APPL-NO: EP89123354

APPL-DATE: December 18, 1989

PRIORITY-DATA: DE03900946A (January 14, 1989)

INT-CL (IPC): H01F001/153, H01F003/00

EUR-CL (EPC): H01F003/00 ; H01F001/153

ABSTRACT:

PROBLEM TO BE SOLVED: To obtain a ferrous soft magnetic alloy with high
saturation magnetic flux density by preparing a soft magnetic alloy which has a
composition represented by specific formula and consisting of Fe, Co, B, Zr,
and Cu and is composed essentially of amorphous phases and fine crystalline
grains of Fe of bcc structure, having specific saturation magnetic flux density.

SOLUTION: An amorphous alloy, having a composition represented by formula
(Fe<SB>1-a</SB>Co<SB>a</SB>)<SB>b</SB>B<SB>x</SB>Zr<S
[where the symbols (a), (b), (x), (y), and (z) stand for ≤0.05, 84-92 atomic
%, 2-8 atomic %, 4-8 atomic %, and 1-3 atomic %, respectively], is cooled
rapidly from molten metal state. Subsequently, heating and cooling are carried
out to precipitate fine crystalline grains, by which a ferrous soft magnetic
alloy, having ≥15kG saturation magnetic flux density and composed
essentially of amorphous phases and fine crystals of bcc structure precipitated
from the amorphous phases by heat treatment, is prepared. By this method, the
ferrous soft magnetic alloy, having excellent effective high permeability and
also having high mechanical strength and high thermal stability, can be
obtained.